



PATENT APPLICATION
DOCKET NO. 22001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Chien-Min Sung	<p>CERTIFICATE OF DEPOSIT UNDER 37 C.F.R. § 1.8</p> <p>I hereby certify under 37 CFR § 1.8 that this correspondence is being facsimile transmitted to the USPTO or being deposited with the United States Postal Service with sufficient postage as first class postage in an envelope addressed to Commissioner of Patents PO Box 1450 Alexandria, VA 22313-1450 on the date indicated below.</p> <hr/> <p>Name</p> <hr/> <p>Date of Deposit</p>
SERIAL NO.:	10/627,442	
FILED:	July 25, 2003	
FOR:	NANODIAMOND PCD AND METHODS OF FORMING	
ART UNIT:	1755	
EXAMINER:	Marcheschi, Michael A.	
DOCKET NO.:	22001	

DECLARATION OF HYUN SAM CHO
UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I, Hyun Sam Cho declare as follows:

1. I hold a B.S. degree in metallurgical engineering and a M.S. in chemical engineering and a Doctor of Philosophy in chemical engineering, all from Ohio State University in Columbus, Ohio.
2. I have worked in the diamond tool industry for 30 years.
3. I spent 10 years at General Electric Company, Diamond Tools Division.
4. I currently serve as a vice president of Asia Polydiamond Company, Ltd (Adico)

and continue to participate in development of new products involving polycrystalline diamond materials.

5. I am a named inventor on ten issued United States patents and several pending patent applications.

6. I have recently reviewed U.S. Patent Nos. 3,745,623 to Wentorf Jr.; 4,861,350 to Phaal; 4,695,321 to Akashi et al.; 5,912,217 to Sumiya; 6,342,301 to Yoshida et al.; 4,505,746 to Nakai et al.; 4,954,139 to Cerutti; and 4,604,106 to Hall et al.

7. As one skilled in the art, upon reading these one would not be lead to sintering of nanodiamond without a catalyst. Neither specific passages nor the references as a whole would suggest to someone skilled in the art sintering of nanodiamond in the absence of a catalyst.

8. It is my belief that the presence of a sintering aid to form PCD from micron diamond was well known and accepted as a fundamental requirement in formation of PCD materials among those skilled in the industry. It is widely accepted that sintering aids can be introduced by mixing sintering aids with diamond powder or can be introduced by infiltration from an external source, e.g. an adjacent cemented carbide blank.

9. It is further my belief and opinion that micron diamond and nanodiamond are distinctly different materials which are considered for different applications and are not freely interchangeable. Those skilled in the art of conventional PCD materials would not consider using nanodiamond materials without a sintering aid upon reading any of the above references.

10. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States

Code, and that such willful, false statement may jeopardize the validity of any patent issuing on the above-identified proceeding.

DATED this 19th day of May, 2006.

Dr. Hyun Sam Cho